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The AMERICAN DENTAL JOURNAL

BERNARD J. CIGRAND, M. S., D. D. S.
Editor & Publisher & Proprietor.

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TABLE OF CONTENTS.

EDITORIAL AND COMMENTS—

Are We Up to Our Professional Definition?..... 513
 The Intra-Dental Band System. By Dr. B. J. Cigrand 516.

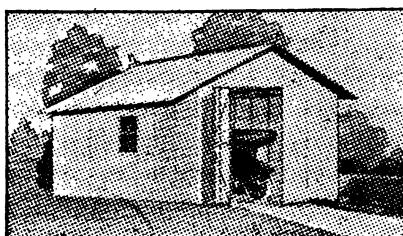
ORIGINAL CONTRIBUTIONS—

Dentists as Speakers. By Mr. William Whitford..... 518
 Superstitions and the Dental Art. By Mrs. R. Lindsay, L.D.S 523
 The Man Who Made the First Electric Motor. By Professor T. Commerford
 Martin 526
 Success Is the Thought of Life. By Dr. C. S. Stockton 529
 "Into the Jaws of Death." By Gen. George E. Pickett..... 534

WHO'S WHO AND WHY—

Dr. Rollin Reed Tuller—Sketch No. 30..... 537

ZYGOMATIC EXERCISE 539



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AMERICAN DENTAL JOURNAL



DR. BERNARD J. CIGRAND
EDITOR :: PUBLISHER :: PROPRIETOR

For the past seven years the writer has been identified with the corps of editors of this dental periodical but for the last two years the entire editorial and literary phases have been under my complete and absolute control; but the advertising features were not without a hamper, as the Journal was published by a trade house. But with July 15th, 1912, advertising and everything under the cover of the American Dental Journal will be in my personal charge, as the entire plant and its good will have come to me by purchase; and from this date on, one half of my time will be devoted to the welfare of this periodical and the great cause and mission of dentistry—as indicated on the title page of this Journal. The foregoing assures the dental profession of an Independent Journal and renders to the practitioners an opportunity of possessing a reliable voice as well as an arena for discussing all matters vital to the progress of the art and science of Dentistry. The

motto of this advanced Dental Periodical shall be:—"Active in all worthy dental affairs but neutral in none."

Very Sincerely, B. J. CIGRAND.

ENTERED AS SECOND-CLASS MATTER AT BATAVIA, ILL.

July 15th

EDITORIAL AND COMMENTS

1913

ARE WE UP TO OUR PROFESSIONAL DEFINITION?

Is the definition of dentistry ahead or behind the practitioner? Are we fulfilling what is expected of us, or are we in advance of what is anticipated? This would certainly form an interesting debate; besides, no two dental practitioners,—be they of the ranks, or leaders, or teachers,—would agree as to the definition. We are all disorganized as to our professional

terminology, and the variety of expressions as to "What is dentistry?" would make a good-sized book.

This journal will be pleased to arrange to publish in the future editions the best or most comprehensive definitions sent in by its readers. It will do a world of good if we as a profession arrive at a word symbol or definite definition of our profession.

Not long since, while addressing an audience of teachers at Galesburg on the subject of "The Dominion of Dentistry," one of the teachers asked your editor to give a definition of dentistry, that she might place it on the blackboards of the rooms and have the pupils learn it. I was the lecturer of the Illinois State Dental Society, and the teacher was entitled to my earnest definition. The question seemed simple, but therein lay its greatest difficulty—for that which is easiest to see is often the most difficult to describe.

Well, I suggested that the definition should be simple, comprehensive and inclusive, and suggested that she might place on the school blackboards this sentence: "Anything which relates to the health, harmony, preservation or substitution of the mouth and teeth can be classed as dentistry."

"But," added the principal, "what of extracting of teeth and cutting out necrosed bone of the jaw?"

That does not belong to dentistry. Such operations are in the province of dental surgery—the very opposite of dentistry.

At the present writing there are no two dental text-books, nor dictionaries, or encyclopædias, which agree as to what dentistry stands for, and your editor asks you to send in your version of the art and science, and by that means assist in establishing a true and comprehensive word picture of our professional purpose.

Dentistry has come to mean dental preservation, restoration, regulation, affixation and substitution, and this quintet of words is the synonym for dentistry.

Dental elimination, dental extraction—the antonym of dentistry—has been shifted to dental surgery, which art and science stands for subtraction and removal.

While oral surgery, which is either a branch of dental surgery or vice versa, relates to oral eliminations or removals

adjacent to the teeth, but does not include the dental organs; the surgical cure of cleft of palate is oral surgery; the cutting and slicing of the mouth is oral surgery, and the surgery of the tongue is in the same classification.

These surgical procedures are all aphæretic, and mean, as its Greek foundation indicates, a "taking away from," a "removing from," "to subtract" and "to sever."

While dentistry is divided into two grand divisions,—namely, the curative and the prosthetic,—all the things we do to preserve the teeth are either one or the other of these two scientific or artistic agencies. Even operative dentistry is half-curative and half-prosthetic; the curative including any process or treatment—be it mechanical or medicinal—which tends to heal or preserve; while the prosthetic is any addition, any substitution, any restoration, and hence includes a gold filling; an inlay, be it metal or porcelain, is prosthetic in conception and purpose.

If you wish to keep abreast of your profession, keep a close watch on the new definitions of dental terms, and the AMERICAN DENTAL JOURNAL will during the coming year afford you the opportunity of assisting in establishing these newer and later word symbols.

The very title "Doctor of Dental Surgery" is a misnomer, and already the leading men are recognizing that we are not properly labeled as a profession. Read what Drs. Truman of Philadelphia, B. Holley Smith of Baltimore, Burton Lee Thorpe of St. Louis and a few others will write on this subject—expressly for the AMERICAN DENTAL JOURNAL.

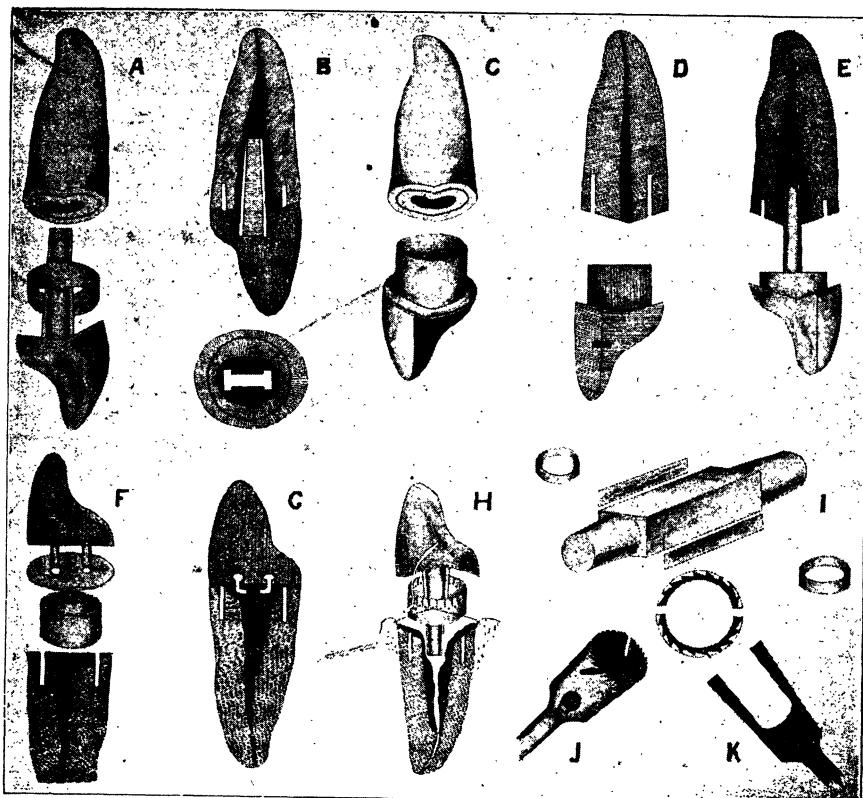
Shall the new names and their meanings stand for actualities, or be, as in the past, vague, misleading and indefinite terms. Lend your help—send in your idea! What term will you use which shall include dentistry, oral surgery, dental surgery, orthodontia and dental and oral hygiene? And what is the human service of our profession?

The degree of "D.D.S." should stand for Doctor of Dental Science. It would then include surgery, prosthesis and all attributes.

THE AMERICAN DENTAL JOURNAL—One Year for One Dollar

THE INTRA-DENTAL BAND SYSTEM

BY DR. B. J. CIGRAND



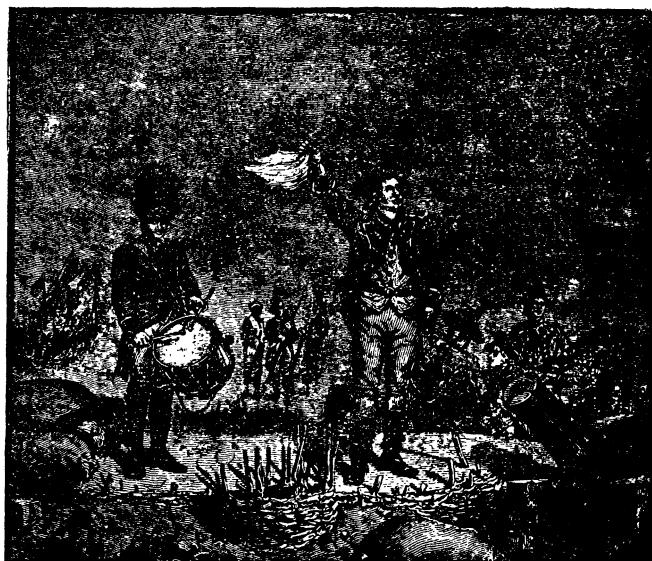
The above engraving illustrates the several uses of the intra-dental band, as given in a clinic at the tenth anniversary celebration of the Odontographic Society of Chicago. Papers on this method were read at the Tri-Union Dental Meeting (Maryland, Washington, D. C., and Virginia) at Baltimore, June 3, 1898. Papers and clinics given at Illinois and Iowa state dental societies.

- Figs. A and B—Logan crown, with intra-dental band.
- Figs. C and D—New crown, with band acting as a post.
- Fig. E—Richmond crown, with intra-dental band.
- Figs. F and G—New porcelain crown, held by intra-dental band.
- Fig. H—Badly decayed root, with intra-dental band.
- Fig. I—Gauge-mandrel and complemental bands.
- Figs. J. and K—New trephine for preparing and trimming roots.
- Figs. I, J and K—Instruments for constructing intra-dental band.

(Patent applied for.) System complete, \$5.00.

COMMENTS

The AMERICAN DENTAL JOURNAL, with this July issue, begins its eleventh volume; and again proclaims to its readers and prospective subscribers that, while it is edited, published and owned by Dr. B. J. Cigrand, it in truth belongs to the dental profession. This journal, like the "boys of '76," is organized



for the battle of freedom and independence. Every subscriber is a soldier who believes that the profession is large enough, strong enough and wise enough to own and operate a periodical which is neither owned or influenced by manufacturer, depot, society, college or fraternity—but hopes to treat all these great institutions liberally and fair.

It requires money to publish a journal of this character—the reading matter is interesting and instructive. You will not be burdened with long, dry, tedium-begetting society discussions.



ORIGINAL CONTRIBUTIONS

DENTISTS AS SPEAKERS

BY MR. WILLIAM WHITFORD,
Official Stenographer for many Local and National Professional Societies

[Continued from page 489, June issue.]

[Mr. Whitford, who is well known to every reader of the AMERICAN DENTAL JOURNAL, has consented to present an essay which will be most interesting and instructive. We trust all readers will absorb what he has to say. His experience and ability is here splendid proof of his grasp of the subject.—EDITOR.]

The acoustic properties of most auditoriums or convention halls are imperfect. But these defects generally have a physical cause which admits of being guarded against by the adaptation of the speaker's position and tone. Monotony of a low-pitched voice exerts a soporific influence over an audience which no strength of thought or beauty of language can wholly counteract; and if there be regularly recurring minor notes, the most startling expressions lose their power. Even to those who do not sleep the sounds bear no sense. The prime object of a speaker should be to make himself understood; and to this end sense should never be sacrificed to sound. A speaker should never use more force than necessary. If requested to speak louder, he should beware of raising the pitch of his voice; by a slight increase in volume on the same key he can make anyone, whose organs of hearing are not defective, hear distinctly. The groundwork of good speaking is the tone of lively conversation.

Vivacity is not force; yet many speakers, to evoke interest, use more force, when the only means of gaining what they seek is increasing animation. Dr. Henry Mandeville gives a distinction of supreme moment between force and vivacity. He says: "We should be careful not to confound force with vivacity. Force is strength, energy; vivacity is life, animation. Force has respect to the hearer; vivacity to the subject. . . .

Force, to the verge of vociferation, especially if uniform, may be associated with dullness; vivacity never; and yet there may be great vivacity in speakers who have little force. . . . Force is under the control of the will, and is measured and regulated by the judgment; vivacity depends upon the feelings and their susceptibility of excitement from the progress of discussion. The one is therefore voluntary; the other involuntary. A speaker can command force at any time; but vivacity, if it comes at all, comes without being summoned or solicited. It appears only when the speaker begins to be interested in his subject; and as this penetrates and warms and absorbs him it grows apace independently both of judgment and volition."

The late Mr. Thomas Allen Reed, an eminent English reporter, says: "I have heard speakers laboring hard to make themselves clearly heard by a large audience, but to very little purpose; they have been speaking in their ordinary tone of voice, and straining every nerve after a distinct utterance, but their pitch has been too low. A very little elevation would have made them more audible, with much less exertion. I have known speakers with extremely weak voices make themselves well heard in large rooms by simply attending to pitch and clear articulation." A loud voice may be a very indistinct one—sometimes indistinct because of the loudness. The essence of distinctness is a clear, crisp articulation. With some speakers the vowels absolutely drown the consonants, which have thus no opportunity of asserting themselves, and the result is that the hearers have but a vague conception of the words that are uttered. Audibility is not dependent upon volume of sound. Many speakers are unintelligible because of loudness of voice. A peculiar effect is often produced after the first few minutes by the very loud speaker, especially if in a monotone. The auditors are delighted to hear his strong, melodious voice, but after listening for a while they become conscious of difficulty, and before he closes have lost interest. The impact upon the tympanum and upon the finer fibers within has dulled sensibility. Some speakers employ but two tones,—one a low pitch, and the other a piercing shriek,—which they alternate with

uniformity now and again, with no regard to sense or length of the intervals. Others allow the voice to fall at the end of sentences, and occasionally on emphatic words. Those who attain high success as speakers must be heard agreeably, and, if possible, their voices should be musical. Under no circumstances should the speaker be content to allow his voice to remain rough, harsh or grating. Many extemporizers have but one style of delivery. Their tones are the same, whether they deliver a business statement, a presentation speech, a congratulatory address at a golden wedding, a witty after-dinner response or a patriotic oration.

SUGGESTIONS FOR SPEAKERS

No pains, nor toil, nor time should be spared in careful preparation; in making descriptions of cases graphic and forcible, statements lucid, appeals pathetic; in filling the subject with what will both strike and stick. It is necessary that a dentist shall have a clear conception of his subject in order to instruct and convince. Vivid conception generates power. Let the divisions of subjects be clear and logical. These should be simple, natural, progressive, and thoroughly mastered. If possible, the dentist should have facts, points, arguments and illustrations at his tongue's end. There is power in illustration. Let the illustrations be from recent occurrences.

DELIVERY

The first duty of a dentist in addressing an audience is to make himself heard. If he speaks very rapidly, his hearers will miss words here and there, and he fails to produce the effect intended. He should be full of his subject and impressed with its importance. He should speak deliberately, enunciate distinctly, and in a natural voice. He should express his thoughts with clearness and force. His peroration should be a sharp, clear summary of established propositions, forced home, perhaps, by an impressive illustration. One of the cardinal virtues of good speaking, therefore, is distinctness of utterance. A speaker may be slow and deliberate, may express himself in exceptional English, and be in all other respects

easy to report, but if he has not acquired the art of making himself heard, much of what he says loses its effect.

The real secret of effective delivery lies in the ability of a speaker to impress himself with his subject. He for the time becomes the standard by which all thought and feeling and sentiment of a whole assembly are measured; nor can he hope to produce in his hearers an interest greater than his own. A good speaker, as his mind becomes inflamed with unwonted activity, rises to a plane of thought and feeling of which he himself is incapable in his calmer moments. His conception is sharpened and his thoughts come with a clearness and precision that leave no time for hesitation. The mind, as it were, becomes intoxicated with its own ideas. The perception of the hearer is correspondingly quickened, and the audience, catching the inspiration of the speaker, unconsciously rises with him, as if animated by the same spirit. Speaker and hearer have become thoroughly *en rapport*, and it may be truly said of a great assembly, "A thousand souls with but a single thought— a thousand hearts that beat as one." Ability to become deeply impressed with the subject under consideration, the power to rise to a sublime conception of it in delivery, and the faculty in a speaker of transmitting his own inspiration to his hearers, is the real basis of good, effective speaking. While all dentists can never hope to attain a high type of oratory, still some may be greatly benefited by a better understanding of the principles that underlie good speaking.

One of the facts disclosed by reporting dentists for the last sixteen years is the marked tendency toward greater simplicity of expression. Involved sentences and the use of big words to say little things are not tolerated as they once were. Conciseness and condensation, as elements of style, have largely taken the place of classicism. It is not so much stateliness as incisiveness that is sought. The axiom of the modern speaker appears to be that to talk effectively one must speak tersely. The most pleasing and impressive speakers are those who understand word-history best, and who are more skilled in the nicer refinements of our vocabulary. To feel the force of all there is

in their speeches we must partake of the same kind of knowledge, and hence derive the same discriminating instinct.

DIFFUSENESS

A common error among young dentists, in discussing papers read before dental societies, is a tendency to diffuseness, which may be defined as a copious use of words so arranged as to create the suspicion that a thought is concealed somewhere among them. The youthful dentist,—and, we regret to say, some of the older members of the profession,—in debate, feel it necessary to describe ordinary things in an extraordinary way, and strive to dignify commonplace thoughts by clothing them in fulsome rhetoric. The result is a painful incongruity between the thoughts and their apparel. For instance, a young dentist, instead of saying that a man was thrown sideways from his carriage, breaking his leg and putting his ankle out of joint, said that "the patient was projected transversely from his vehicle, fracturing the tibia and fibula and luxating the tibiotarsal articulation."¹ Again, another speaker, instead of saying that he had found a large cancer of the liver at a post-mortem examination, said that he had found "a colossal carcinomatous degeneration of the hepatic mechanism." The effect of the use of such large words is usually heightened by an over-wrought, stilted delivery, as unnatural as it is unnecessary. These faults can be corrected by time and experience. Simplicity is really the thing to be sought. In this connection we are reminded of an excellent story which is told of Dr. Skinner,² an eminent theologian. He was unable to use simple words in either preaching or lecturing. One Sunday he was asked to address the Sunday-school class, and consented to do so. He began his address in this wise: "The Westminster Catechism is an admirable syllabus of Christian doctrine." As soon as he had uttered those words the superintendent intimated that the children could not understand him; whereupon he said: "Your superintendent informs me that you do not understand what I say. Let me explain: Syllabus, my dear children, is synonymous with synopsis."

¹Edmund Andrews, introductory address, Nov. 2, 1895.

²James M. Buckley, "Extemporaneous Oratory."

[To be continued.]

SUPERSTITIONS AND THE DENTAL ART

BY MRS. R. LINDSAY, L.D.S.

[Continued from page 504, June issue.]

[The following interesting article by the first woman dental graduate of England has valuable historical material. The *London Dental Record* recently directed special attention to her as the first lady dentist.—EDITOR.]

Jaques Houllier, in the sixteenth century, was the first to oppose the theory of worms; though he did not deny their existence, "because so many eminent authors affirmed the theory." Pierre Fauchard, 1690-1761, called the "Father of Dentistry, says: "It was and still is believed by the vulgar, and also by some writers, that all toothache is caused by worms, which little by little destroy the tissue and osseous fibers and the nervous threads. If this were so, the explanation of pains and of decay of the teeth would be simple. This opinion is founded on pretended experiences relating to these insects, which may, it is said, be made to fall out of the teeth by the smoke of henbane seeds; this, however, has been declared fabulous by Andry."

It was left to the evangelical pastor, Johann Christian Schaffer, 1757, to show up the fraud by publishing a plate illustrating the manner in which henbane seeds burst and resemble small worms.

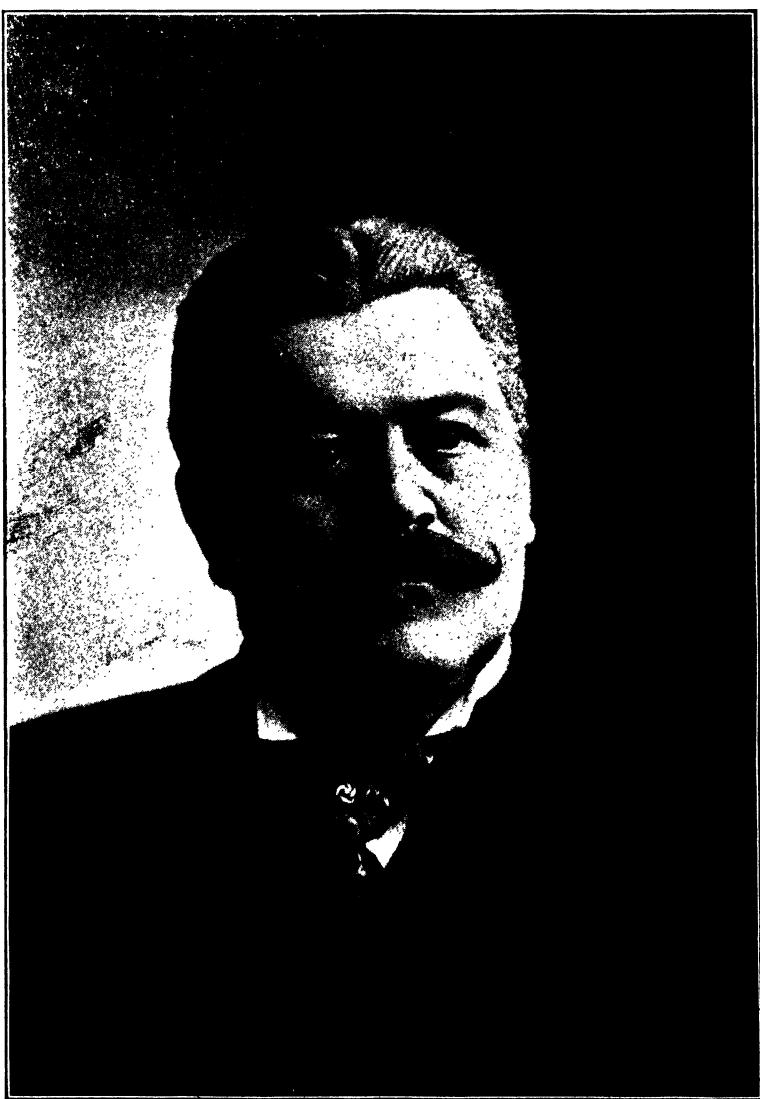
In a small country town in England where I used to practice I first made the acquaintance of the toothache worm. A woman came to have a tooth extracted. After the operation she insisted on examining the tooth, which, fortunately, had the ends of the pulp projecting beyond the apices of the roots. This was a source of comfort to her, for in her belief these were the worms that had been gnawing at her tooth. Of course, I was puzzled, never having heard of these insects before, and was interested to learn that they were the cause of all toothache, and that the chemist had supplied some stuff with which a friend of the patient's "had drawed and drawed and got six worms with yellow bodies and black heads;" "but," she added, "I drawed and drawed and didn't get anything." A year after

this a Welshman told me that in the part of Wales from which he came it was customary for sufferers from toothache to get some stuff from an old woman, which, sprinkled on hot coals, gave off fumes; these were collected in a tumbler and quickly inhaled, and afterward small worms were seen inside the tumbler. Last year in a shop not very far from here I asked for henbane seeds. The herbalist was rather diffident about selling them, but when I promised to be very careful he let me have some. At first he was disinclined to admit that he recommended them for toothache, but relented after a little while and told me how to apply it. The method was to sprinkle the seeds on hot coals or a brick and conduct the fumes to the mouth by means of a funnel. Unfortunately I spoilt the narrative by asking if I should see any worms, for he refused to tell me any more.

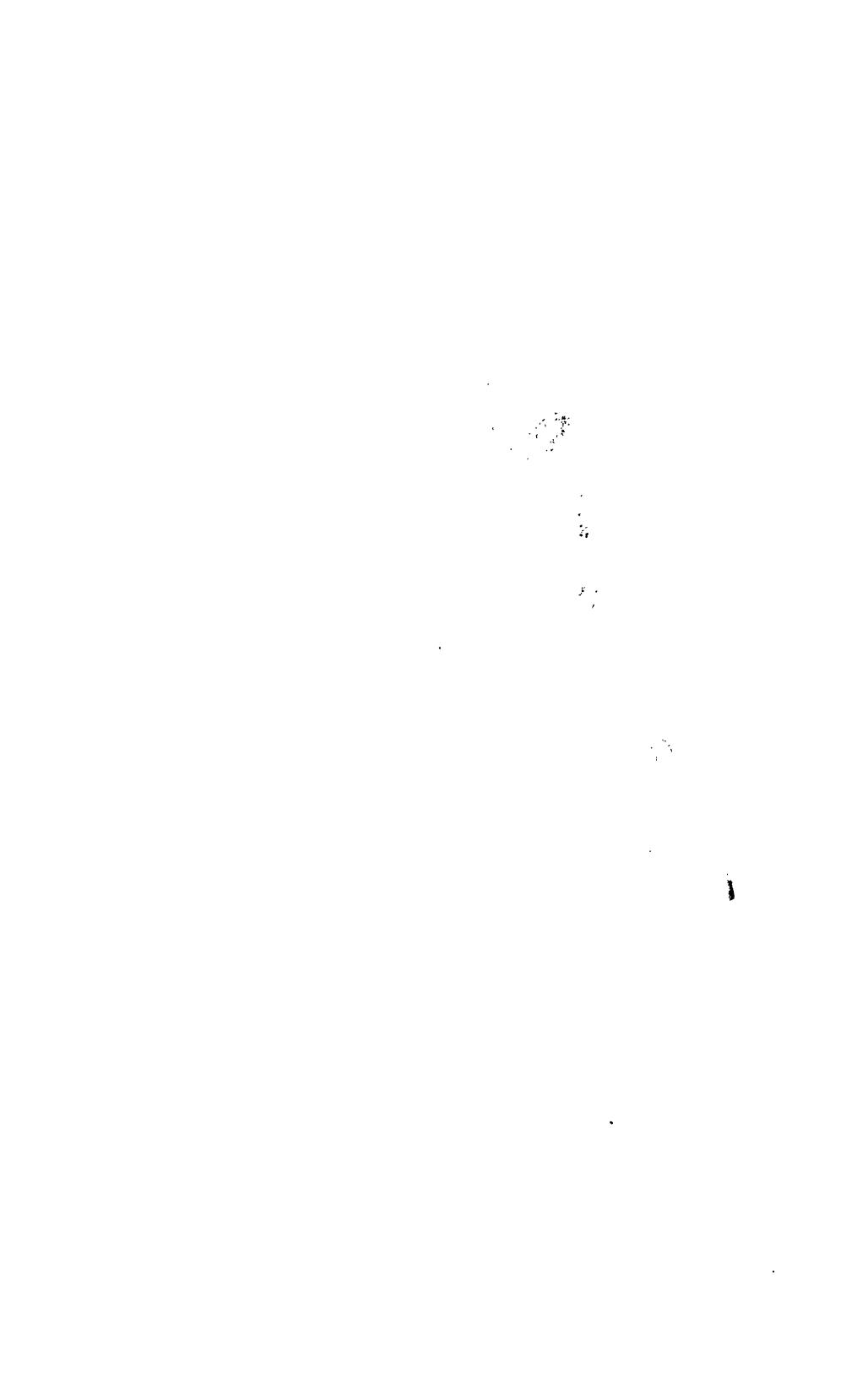
Gradually the true properties of these sacred plants were discovered through this hap-hazard use of them, some being discarded later, when found of no real value—as, for instance, the mistletoe, which the Druids call “all heal,” and Culpepper says “is good for the grief of the sinew, itch, sores and tooth-ache, the biting of mad dogs and venomous beasts.”

Douce says of henbane that it is called “insana, ‘mad,’ for the use thereof is perillous; for if it be eate or dronke, it breedeth madness or slow lykenesse of sleepe.” Another old book states “the leaves are cold in the third degree. The two other kindes are yet more colder, almost in the fourth degree, very hurtfull to the nature of mankind;” and here is the germ of the theory of anæsthesia: “For such remedies as consist of things that are extreme cold the disease or paine is not cleane taken away, but the body and grieved place is but only astonished or made asleepe for a season, and by this means it feeleth no paine.”

“Seeds of black henbane taken alone or with wine causeth raging or long sleepe, almost like unto drunkenesse, which remaineth a long space, and afterward killeth the partie.” The hyoscyamine in the fumes would have the above effects; but it



DR. ROLLIN BREED TULLER.



was playing with edged tools, and this, as you see from the above quotations, they dimly perceived.

There are many charms and blood-curdling remedies in these old books,—remedies far more potent and more readily adopted than any the modern dentist can supply,—but my object has been to attempt to show how the germs of dental art gradually rose out of this mass of superstition and magic. Here and there are very modern touches, such as this couplet:

"Eat an apple going to bed,
Make the doctor bake his bread."

And as I look back I can not help wondering whether the sway of the teeth over the life of man has utterly departed, and I like to think that there still exists, though in a far-away city, a gorgeous shrine whose doors are inlaid with silver and ivory. Within the sanctuary is a solid silver table, behind which stands a silver-gilt dagoba or bell-shaped shrine, encrusted with rubies and other precious stones, containing the sacred tooth encircled with fine gold wire and resting on the heart of a lotus blossom, the symbol of eternity, and before this palladium millions of people bow.

Now I will conclude by quoting a passage from Dr. Frazer on our debt to the savage: "For when all is said and done our resemblances to the savage are far more numerous than our differences from him, and what we have in common with him and deliberately retain as true and useful we owe to our savage forefathers, who slowly acquired by experience and transmitted to us by inheritance those seemingly fundamental ideas which we are apt to regard as original and intuitive. We are like heirs to a fortune which has been handed down for so many ages that the memory of those who built it up is lost, and its possessors for the time being regard it as having been an original and unalterable possession of their race since the beginning of the world. But reflection and inquiry should satisfy us that to our predecessors we are in debt for much of what we thought most our own, and that their errors were not willful extravagance or the ravings of insanity, but hypotheses justifiable as such at the time when they were propounded, but which a fuller

experience has proved to be inadequate. It is only by the successive testing of hypotheses and rejection of the false that the truth is at last elicited. After all, what we call truth is only the hypothesis which is found to work best. Therefore in reviewing the opinions and practices of ruder ages and races we shall do well to look with leniency upon their errors as inevitable slips made in the search for truth, and to give them the benefit of that indulgence which we ourselves may one day stand in need of. *Cum excusatione itaque veteres audiendi sunt.*"

THE MAN WHO MADE THE FIRST ELECTRIC MOTOR

BY PROF. T. COMMERFORRD MARTIN

[Continued from page 499, June issue]

[One of the greatest labor-saving devices which has found its way into the modern dental office is the electric motor. It has assumed a position in so many forms that its power is employed all the way from carving the cavity and malleting the gold to affording speed to the fan which keeps the breath of life in both patient and operator. Why should not this man be known to the dentists for whom he did so many valuable favors? Read this paper. It will make you appreciate what others have done for you.—EDITOR.]

In July, 1834, Davenport had built his first motor, with two stationary electro-magnets and two revolving, the changes of polarity in the two sets causing attraction and repulsion, with consequent rotation, thus, as he says, "producing a constant revolution of the wheel." We have not advanced a bit since that hour; nor can we, for, as Davenport wrote at the time of securing his patent, the principle of his invention "was the production of rotary motion by repeated changes of magnetic poles." If anyone can improve on the method or the description of it he is entitled to a high place in history. That patent, granted February 25, 1837, was as broad as a papal bull, and embodied this claim: "The discovery here claimed and desired to be secured by letters-patent consists in applying magnetic and electro-magnetic power as a moving principle for machinery in the manner above described, or in any other substantially the same in principle."

The crude motor of 1834 was soon followed up by an improved form in 1835, and by many others as the years went

by. The motor of 1835 is interesting as being the earliest known instance of the application of the modern commutator. An elastic contact-spring or brush pressed against metallic segments fixed upon a revolving shaft, so that the shifting polarity of the magnets was maintained as current was received from the battery. In 1836 and 1837 motors and models were built illustrative of electric railway work, and the motor was shown to the public running on a miniature circular track twenty-four inches in diameter. The battery was not carried by the car, but was placed in a tray at the center of the circle, and contact was made through mercury cups. This device, embodies, therefore, remotely but inevitably, the idea of a central station source of supply. Later inventors still carried their batteries on the car, just as a storage battery car does today. Moreover, the magnetic field magnets and those of the armature were connected in parallel, so that at that early date we have a shunt-wound motor, each core being wound twice with twenty-four convolutions of No. 16 wire, connected in parallel. Another striking fact was that, as the model itself showed, the circular track was used as the return circuit, just as every trolley car uses it today. In 1836 his motor model filed at the patent office in Washington was destroyed by fire, as well as 7,000 others; just as another Davenport motor at the Rensselaer Institute, Troy, was destroyed in 1862 by fire. This kind of fatality pursued much of his work. In 1893 the present writer exhibited at the Chicago Columbian Exposition one of these Davenport railways, where it received an award. Its exhibit was requested for the American section of the Paris Exposition of 1900, and it was shipped early in that year with the government exhibits on the steamer "Panillac." Violent storms swept the Atlantic, and the steamer has never been seen since. In like manner disappeared the first dynamo ever placed on a ship. Mr. Edison equipped the Arctic exploring ship "Jeannette" with a little dynamo so arranged that, if necessary, it could be driven by manual power "to help keep the men warm." The ill-fated "Jeannette," like the "Panillac," now lies in ocean depths, awaiting some cataclysm, thousands of

years hence, when men may see again these relics of their remote ancestors, preserved in the Museum of Eternity.

Nothing daunted by fire, Davenport made a third trip to Washington in 1837 and secured his memorable patent—first of a long line in which the inventive genius of our people has shone forth so strikingly. During the same year Davenport and his friend Cook established themselves in New York, with a labofatory and shop, and gave exhibitions of their apparatus to crowds of visitors, including Morse, already busy on his telegraph, and Page, who fourteen years later operated a battery driven locomotive of twelve horse-power on the Washington and Baltimore Railroad. In March, 1837, the partners, to raise funds for their work, organized the Electro-Magnetic Association, with its stock divided into shares. So far as can be ascertained, this was the first electric stock company in America; first of several thousands now representing a total capitalization of ten billions of dollars in bonds and stock, and which are earning over \$800,000,000 annually.

The manager of the financial transactions of the partners was not, however, particularly honest, and it required a chancery suit to secure an accounting, as he turned in only \$1,700 out of \$12,000 received. This disgusted Cook, and led to his withdrawal from the enterprise.

As a piece of misfortune the incident was matched by another later, about 1840, when a gentleman in Ohio proposed to join Davenport, and gave him \$3,000 in Ohio bank notes for an interest. Davenport had spent just \$10 when he learned that the bank had broken, and that the money was worth nothing.

Davenport was not only the first man to drive a printing press by electric motor, but he was the editor and publisher of the first electrical journal in the world. In 1859 he gives details with regard to the operation of a rotary printing press with a motor weighing less than 100 pounds. In January, 1840, he began in New York City the publication of a journal which he called *The Electro-Magnet and Mechanical Intelligencer*, which was not only devoted to electricity, but was printed by elec-

trical energy. The paper seems to have gone prematurely to its death; but only a few months later, on July 4th, Davenport came out with another journal, which he called *The Magnet*. This had a real live editor, salary unknown, but it does not appear to have had any longer life than its predecessors.

These, then, are in brief the reasons why we electricians honor Davenport and revere his memory. These are the reasons why his native state and his country should be proud of him. These are the reasons why, struggling against adversity, dying in poverty, and long obscured by forgetfulness, this modest, simple son of Vermont stands forth as conspicuous as one of her granite mountains among the immortals who, for the benefit of their fellow-men, have tamed and utilized the lightnings of the Almighty.

SUCCESS IS THE THOUGHT OF LIFE

BY DR. C. S. STOCKTON, NEWARK, N. J.

[In the death of Dr. Stockton the profession has lost a truly great man. He was a scholar and a leader. Shortly before he died your editor wrote him these lines: "The readers could profit by a sermon from you. Choose the text. I will bring the congregation." His reply was characteristic: "I will preach to the readers of the AMERICAN DENTAL JOURNAL, but there will be arrow-points in the flowers. Your journal appeals to me. You are striving to have the profession take broad and liberal views, and inculcate the literary taste as well as an appreciation for the scientific and historical. May the Lord continue to prosper the cause you have these score of years so fearlessly advocated." Lines like these certainly lend strength.—EDITOR.]

The world is full of contrasts—night and day, life and death, joy and pain. The resplendent sun, the song of birds, the sight of fair fields, are inspiringly beautiful; yet were it not for the night we should know nothing of the mysterious grandeur and glory of the stars.

Men may gloat over their successes, but failures will come.

One man's ideas may be very high; another's exceedingly low. One succeeds without effort; and such attainment would be disappointment to another, but the world applauds lustily

the easy, brilliant performance. Success is the thought of life, rather than the patient working out of its details. We accept the standards which a false condition of society raise, and glamour with the pomposity of wealth all those successful, who, like Gould and others, win through cunning and unscrupulousness.

There is no difficulty unsurmountable, no sorrow unbearable, no failure irreversible.

'There must be adaptability between man and his work. Square men were never designed for round holes. To every man there is a place; but there are hundreds of men trying to make life's voyage, and, though they have clear notions of how they ought to act, they are dragging about with them the anchor of ignorance and superficial knowledge.

Hard work is the great factor of success, and Goethe truly said that there is no genius but hard work.

The busiest are the happiest. Work is the salt of life. A pair of shirt-sleeves are a good coat-of-arms.

The napkin in which the slothful servant wrapped up his talent was the sweat-cloth with which he ought, in his toil, to have been wiping the beads of perspiration from his brow.

Some men have too aristocratic conceptions of their dignity and the snobbish notion of the meniality of work. That merchant never succeeded who was not content at some time, or in an emergency, to do the drudgery. A dainty, lily-white fingered dilettante, looking with holy abhorrence on soiled hands or clothing, may indeed live a sort of effeminate, emasculated, wax-doll existence; but as noble doing, or succeeding in the strife of life,—when Greek meets Greek,—they are miserable nonentities. Mere leisured ease is contemptible beside the horny hands of the hodcarrier.

It is the man who, in the beginning of his career, can intelligently lay out his life work, set himself a task which shall require twenty or thirty of his best years, and devotedly persevere in it, who wins; who can endure all discouragements and adverse criticisms and keep the end steadily in view. The man with moderate ability who plans and economizes his time,

and gets the whole worth of his existence, is the victor; he lays out a campaign not only for all summer, but for his whole life. For any man, especially a professional one, the closest, severest study is requisite to success. It was the motto of a celebrated chemist to examine all the contents of vials which others threw away. Only by the most continuous reading can the professional man keep abreast with the thoughts and discoveries of his chosen calling.

Take the world as you find it,—a hard and stubborn one,—and do not expect to convert it in six months; but do not sneer at any genuine, hearty effort at reforming humanity.

The world is growing better. With some the time to act never comes; they devise their plans and elaborate them, but never put them into actual endeavor. You must know when the iron is hot enough—then strike.

The civilities of life, the courtesies and deferences which dignify the true gentleman, have been the key of many a man's success. Destiny may hang on politeness.

Out of difficulties grow miracles. Misfortune crushes the weak, but nerves the strong to greater effort. To the wise man, instead of overwhelming him, only teaches him more carefulness in constructing his plans and conducting his experiments. The chemist detects clearly the ingredient which balked him, and makes some grand discovery through his very blunders. The Roman general was determined to "find a way or make it." Cyrus Field tried over and over again before he succeeded in laying the cable that binds the continents. Then the sarcasm of nations was changed into applause.

Whittier writes:

Well, to suffer is sublime!
Pass the watchword down the line;
Pass the countersign, "Endure!"
Not to him that rashly dares,
But to him that nobly bears,
Is the victor's garland sure.

Determination to get well has much to do with recovered health.

You can, if you try, make it as uncomfortable for the whale as the whale can make it uncomfortable for you. There

will be some place where you can brace your feet against his ribs, and some large upper tooth around which you may take hold, and he will be as glad to get rid of you for a tenant as you will be glad to get rid of him for a landlord. There is always a way out if you are determined to find it.

"Truth crushed to earth shall rise again. The eternal years of God are hers." He who anticipates disaster suffers from it twice over. Cowards die many times before they taste of death; the brave man dies but once. Let us never lose heart.

High hopes go down like stars sublime,
Amid the heavens of freedom;
And brave hearts perish in the time
We bitterliest need 'em.
But never sit we down and say
There's nothing left but sorrow;
We walk the wilderness today,
The promised land tomorrow.

But, most of all, measure success or failure by the good you do humanity. You may not in your profession become a great authority, leading and perpetually suggesting, but as one of the rank and file you will have the satisfaction of knowing that you have done something to elevate humanity. Contrast a high philanthropic life with one devoted to mean, sordid ends. There is joy in the giving of comfort and felicity in the retrospect, and enviable is he who goes down to his grave loaded with the respect of his fellow-practitioners and bewailed by the friendless.

There is in dentistry something more than the filling and extracting of teeth and the insertion of artificial ones. If an iron puddler spoils his mold, it is no great loss; or if your barber mangles your hair in cutting it, it will repair itself; but when the clergyman, through ignorance of theology, misleads an inquiring mind; when a lawyer, through mismanagement of his case, risks his client's life; when a physician, by culpable stupidity, slays while pretending to save, it becomes a crime. So with the dentist who, by his reckless hand's work, inflicts useless suffering, or mars his patient, or leaves a memorial to

curse him in roots of bitterness. Our aim should be to discover the best methods of doing quickly and painlessly what is considered by many a slow torture.

As the medical profession has found its way from blistering, bleeding and the administration of heroic boluses and preposterous powders and potions to the truth that the mild powder cures, so our intention must be the invention of schemes which shall leave no injury and inflict no pain. It is for us to study our work on a tooth with as much forethought and careful in detail and prearrangement as the diamond-cutter displays in fixing on and polishing the faces and angles of his sparkling gems. In our efforts to conserve the teeth we should remember that we are dealing with a portion of God's handiwork, a part which He pronounced "very good."

So, while study the various arts and methods whereby we cover nerves and still their throbbing, and fill its exterior with the precious metals; while we seek medications and the most efficacious process of arresting dental decay and death, let us learn to have reverence for our work, and how sublime that work is which shall restore to primeval health and usefulness one of the Creator's gifts to man. And since the house we live in can be materially reconstructed,—our eyes fitted with spectacles, our ears with trumpets, our teeth with fillings and crowns which serve the same purpose as the original parts,—we learn how to replace the wreck which rottenness and death have made. We prepare the mouth for the substitutes of its late occupants, and place these partial or complete dentures that are almost the counterpart of nature. Sometimes we even do better than nature herself; for some men have such miserable teeth that the poorest artificial ones would serve better.

As we find ourselves investigating the manufacture of teeth we exclaim: "What a work for an artisan is this!" Compared with it, what is the restoration of a painting or a fresco, or the rebuilding of a palace? These deal with lifeless stones and pigments, while we with matter having within it the breath of life. Consider what belongs to the saving of an organ. It is in proportion as honorable as the sacred duty of saving life

itself. The decaying teeth give us our first disagreeable impressions of our mortality; this is the first start of that crumbling away which by and by shall attack irresistibly the whole frame and level it with the dust. Thankful we should be to him who can put away from us these unwelcome suggestions to our thoughts.

Again, if there be superlative merit in the creation of any part of the body the first Artificer, he who interferes to prevent its destruction must share in the glory. Physicians and surgeons are co-laborers with God in the human frame—He conceiving and creating; they preserving against untimely ruin and repairing the broken places. And not only the saving of the organ is under consideration, but the alleviation of pain as well. To give a quietus to the acute suffering of toothache, to act the part of saviors to society, is something to be grateful for.

We sometimes may affect to disparage the pain which proceeds from inferior parts; we do not respect the protest of a tooth nerve as much as the twinge of the heart-strings; but it is a thorn in the flesh, and will make the imperious and haughty soul attend.

[To be continued.]

“INTO THE JAWS OF DEATH”

GENERAL GEORGE E. PICKETT,
Confederate General

[This July issue contains a few items on the dental contribution to the federal victory at Gettysburg in 1863. This letter from Gen. Pickett to his sweetheart was written just before the battle. Pickett's charge was one of the most heroic of all martial history, and its failure resulted because other bodies of troops failed to arrive in support, as planned by Lee. Pickett, as he went into the battle, handed the letter to Gen. Longstreet, to be delivered to his promised wife in the event of his death. This letter has a dental phase.—EDITOR.]

PICKETT'S LETTER

“Well, the long, wearying march from Chambersburg, through dust and heat beyond compare, brought us here yesterday (a few miles from Gettysburg). Though my poor men

were almost exhausted by the march in the intense heat, I felt the exigencies demanded my assuring Marse Robert (Gen. Lee) that we had arrived, and that with a few hours' rest my men would be equal to anything he might require of them.

"Well, my sweetheart, at 1 o'clock the awful silence was broken by a cannon-shot, and then another, and then more than a hundred guns shook the hills from crest to base, answered by more than another hundred—then darkness and absolute silence—then the grim and gruesome, low-spoken commands—then the forming of the attacking columns. My brave Virginians are to attack in front. Oh, may God in mercy help me as He never helped before!

"I have ridden up to report to Old Peter. I shall give him this letter to mail to you, and this package to give to you if—Oh, my darling, do you feel the love of my heart, the prayer, as I write that fatal word?

"Now, I go; but remember always that I love you with all my heart and soul, with every fiber of my being; that now and forever I am yours—yours, my beloved. It is almost 3 o'clock. My soul reaches out to yours—my prayers.

"Oh the responsibility for the lives of such men as these! Well, my darling, their fate and that of our beloved southland will be settled ere your glorious brown eyes rest on these scraps of penciled paper—your soldier's last letter, perhaps.

"We have been on the qui vive, sweetheart, since midnight, and as early as 3 o'clock were on the march. About half-past 3 Gary's pistol signaled the Yankees' attack upon Culp's Hill, and with its echo a wail of regret went up from my very soul that the other two brigades of my old division had been left behind. Oh, God, if only I had them!—a surety for the honor of Virginia; for I can depend upon them, little one. *They know your soldier, and would follow him into the very jaws of death.*"

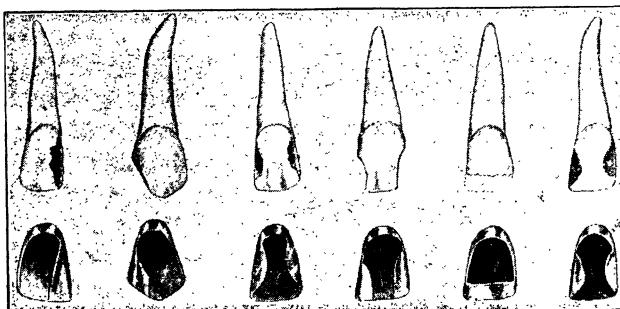
And they rode into the "jaws of death."

Mrs. Pickett, to whom this letter was written, is now living in Washington, where she has been a leader in the southern cotorie for many years. She was married to the general in the midst of the war, shortly after Gettysburg. The wedding was

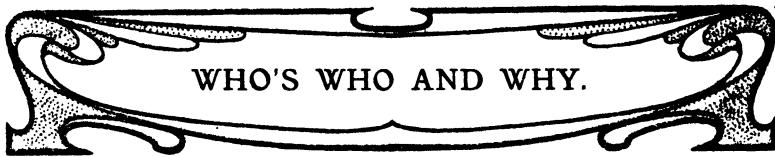
a social event of much importance in the south, President Davis and his cabinet and Lee with many of his generals attending. Before the end of the war a son was born to the general and his wife. The boy became known immediately throughout the army as the "little general," and in after years came to be Maj. Geo. E. Pickett, U. S. A. He died two years ago, returning from service in the Phillipines.

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WHO'S WHO AND WHY.

[Under this title the JOURNAL will devote some space to acquainting its readers with the presidents of state dental, and important local societies; and treat of such other distinguished dental practitioners or their distinguished children as the personal news items merit.

By this means the readers are brought into a closer relationship with the leading spirits of their profession, and a better understanding can grow out of such an acquaintance.—EDITOR.]

DR. ROLLIN BREED TULLER—SKETCH NO. XXX

It is fitting that in this July number some consideration be given to the fiftieth anniversary of the battle of Gettysburg, and that some member of the dental profession be selected for the place of honor who participated in that greatest of modern battles.

There were scores of dentists at that valley of death, and many are living who attest the valor of both armies, but few have risen in the profession to such eminence as Dr. R. B. Tuller, of Chicago. Dr. Tuller was at Gettysburg! That in itself will endear him to the hearts of the dental profession, and his three years of service in the civil war, during which time he participated in twenty six battles, makes him a proud asset in our ranks. He was the chief musician in the 13th New York volunteer infantry, and his patriotic compositions, as well as stirring songs. are a creditable legacy for the living.

The *Record Herald*, of Chicago, on Sunday, June 29th, made a special "Gettysburg Edition," and incorporated a sketch by R. B. Tuller, D.D.S., of which the following is a part:

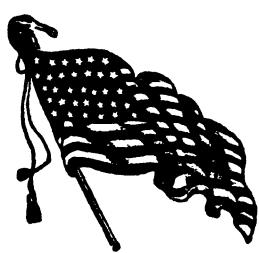
"While we, as support of the batteries on Cemetery Hill, were not, by some fortune, in the fierce hand-to-hand fighting of that charge, we were in the center of the most furious cannonading of the fight, which was the prelude to Lee's advance on that fateful day. Cemetery Hill was a point of concentration of our batteries—and, of course, of the fire of the rebel

guns in their efforts to weaken our fighting facilities. The shots from the enemy and of our own guns passed over our heads mainly, but when a rebel shot or shell found the stone wall used by us for protection the havoc was sometimes greatly multiplied by flying portions of stone. Many were so wounded."

After the war Dr Tuller took up the study of dentistry. Dr. Tuller started at Philadelphia in the Pennsylvania College of Dental Surgery, but graduated from the Chicago College of Dental Surgery, where he later was of the teaching staff. He was born June 29, 1845.

For many years he was associate editor of the AMERICAN DENTAL JOURNAL, and I always enjoyed his genial company and literary products. His pen is now active on *The Bur*, where he is associate editor. He was once president of the Odontographic Society, and he has always labored to advance the cause of progressive dentistry. He might well be known as the "Mark Twain" of the profession, since his native humor has provoked hundreds to burst into explosive laughter. The tragic death of his beloved daughter (automobile disaster) and the untimely death of his son have quelled his humor, but the God-given quality of cheering on the host of the narrow path is still his pronounced characteristic. May his good wife and he continue to enjoy a rich memory and a hopeful future. B. J. C.

Many of the subscribers are sending in the names of prospective dental students. The publisher will credit you with 25 cents for each name, and this will admit of your paying a year's subscription to THE AMERICAN DENTAL JOURNAL.



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ZYGOMATIC EXERCISE.

[A little nonsense now and then
Is relished by nine out of ten.

—EDITOR.]



“What a sweet child!” exclaimed the neighbor.
“Yes,” replied the mother. “Hasn’t he a cunning little nose?”
“And such funny fat cheeks!”
“And a darling bald head!”
“And such fat, pudgy hands!”
“Yes.” (To her husband): “John, do you know I think the baby looks more like you every day?”
Father: “Alike in everything but the teeth!”
Wife: “Why, how’s that?”
Father: “Baby’s teeth are aching to come in. Mine are aching to come out.”



The above photograph was taken in a clinic given by DR. F. U. SKINNER, of Chicago, Ill., when demonstrating Carmi-Lustro and his di-closing's duration.

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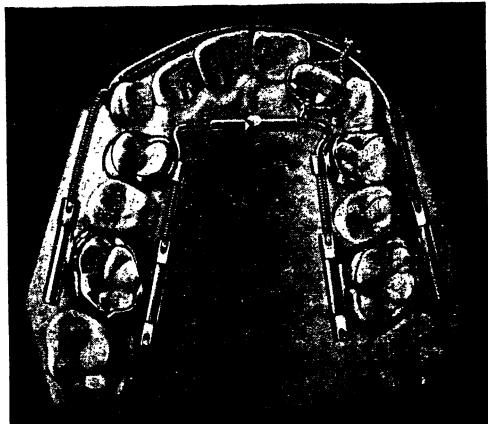
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20K Solder, per dwt.....	.95	Platinum Iridio Wire.....	Market Price
22K Solder, per dwt.....	1.00	Pure Silver.....	Market Price
Coin Solder.....	.95	Pure Zinc, per oz.....	.10
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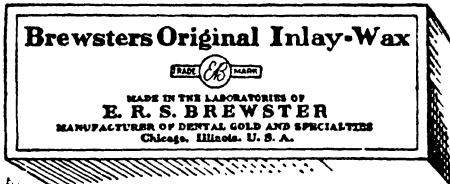
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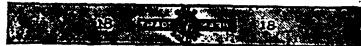
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The Magazine That Helps

Vol. XXXII

SEPTEMBER, 1912

No. 9

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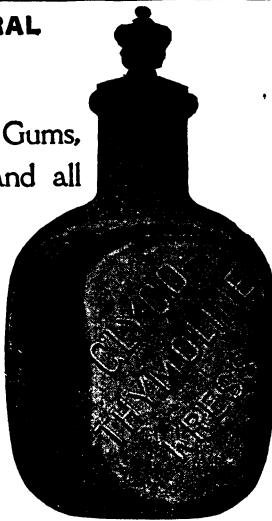
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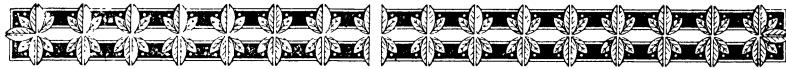
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